

Vascular Plants of Williamson County

Bellardia trixaga – BELLARDIA [Plantaginaceae/Scrophulariaceae]

Bellardia trixaga (L.) All., BELLARDIA. Annual, taprooted, not rosetted, 1(–4)-stemmed at base, primary shoots mostly unbranched, with unexpanded axillary shoots at principal nodes, erect with terminal inflorescence, in range 9–37 cm tall; shoots with ascending, overlapping cauline leaves, stems and leaves short-hirsute, foliage and green structure of inflorescence having conspicuous, stalked glandular hairs with green, ellipsoid heads. **Stems:** somewhat 4-sided, to 5 mm diameter, tough, green, internodes to 15 mm long, short-hirsute and lacking glandular hairs. **Leaves:** opposite decussate (rarely alternate), simple, sessile, without stipules; blade oblong to narrowly triangular-oblong or narrowly elliptic, (14–)30–50 × (2.5–)5–11(–15) mm, subcordate at base, regularly crenate with margin and teeth inrolled under (revolute) on margins, acute (also revolute) at tip, pinnately veined with principal veins sunken on upper surface and raised on lower surface, with some glandular hairs on upper surface. **Inflorescence:** ± condensed spike, to 48-flowered, to 80 mm long in fruit having 20+ closely spaced nodes (internodes short), ca. 20 mm across + projecting leaflike bractlets, flowers opposite decussate in 4 conspicuous vertical files (4-ranked), bracteate, short-hirsute and glandular hairy, not viscid; peduncle = short internode, 4-sided, short-hirsute; rachis 4-sided, stemlike with short internodes, fully hidden by flowers and developing fruits; bractlets leaflike, ovate, to 25 × 9 mm decreasing somewhat upward, crenate on revolute margins, obtuse and revolute at tip, with stalked glands on both surfaces, persistent. **Flower:** bisexual, bilateral, 12–14 mm across; **calyx** 2-lipped, 4-lobed, 7–8 mm long, green or with purple margins, villous and with scattered stalked glandular hairs; lips lateral, sinuses acute and to below midpoint, sinus on lower side deeper than sinus on upper side, lobes acute or obtuse to rounded and having acute sinus on lip 2 mm deep, inner surface also having stalked glandular hairs, persistent and often aging purple; **corolla** conspicuously 2-lipped, 16–18 mm long; tube + throat ca. 9 mm long, white, stretched around ovary, tube 5 mm long and stretched around ovary, glabrous, throat narrowly funnel-shaped; upper lip hoodlike (galea), 8–9 mm long, pale purple at base to purple approaching tip, outer surface with stalked glandular hairs; lower lip 3-lobed, fan-shaped in outline, 12–14 mm wide, central lobe semicircular, ca. 3 × 3 mm, lateral lobes ear-shaped, ca. 5 × 2.5 mm, white, rounded, outer surface having raised veins (pinnately veined) and with stalked glandular hairs; **stamens** 4 in 2 pairs, fused to top of corolla tube, long stamens attached 5 mm from corolla base on long side and shorter stamens attached 6 mm from corolla base on upper side; filaments flat, ca. 9 mm long (long stamens) and ca. 7 mm long (shorter stamens), 0.6–0.7 mm wide, white, glabrous; anthers dorsifixed, dithecal, stacked with anthers of long stamens above anthers of shorter anthers, 1.5 mm long including fine point at tip, purple covered with pale purple hairs (upper anthers) and paler purple covered with light purple hairs (lower anthers), upper anthers tangled by hairs, lower anthers free, longitudinally and inwardly dehiscent (toward stigma); pollen white; **nectary disc** surrounding base of pistil, green, glabrous; **pistil** 1, ca. 17 mm long; ovary superior, ovoid, ca. 3.5 × 2.6 mm, green, densely soft-hairy and with stalked glandular hairs, 2-chambered, each chamber with many ovules attached to center; style questionmark-shaped with stigma pointing downward from galea, light green to greenish at base becoming darker, yellow-green, and puberulent with radiating hairs

approaching stigma; stigma terminal, at level of upper anthers, bulbous, ca. 1×0.8 mm.

Fruit: capsule, loculicidal, 2-valved, many-seeded, ovoid compressed side-to-side, $8-9 \times 5.5-6 \times 4.5-5$ mm, short-hairy with upward-pointing hairs and stalked glandular hairs above midpoint. **Seed:** D-shaped, $0.45-0.5 \times 0.3-0.35$ mm, light brown, having fine longitudinal ridges and finer, closer cross ridges \perp to longitudinal ridges.

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